***TAG Infrastructure Talks* Podcast: Data Centers: Demand, Development, and Future Challenges With Ali Greenwood**
Host: Alan Poole
Guest: Ali Greenwood
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Alan Poole:

Welcome to another episode of *TAG Infrastructure Talks*. I'm your host, Alan Poole, the chair of the TAG Infrastructure Society, and a partner at law firm, Troutman Pepper, where I focus on all things digital infrastructure. I'm very excited to have Ali Greenwood, director of Cushman & Wakefield's Data Center Advisory Group here today. Ali spoke at our data center summit last year where she provided an update on the data center market in the Georgia area, and we thought it would be a great idea to get an update because things are changing fast. Thank you, Ali, and welcome.

Ali Greenwood:

Thank you, Alan. Happy to be here and excited to be talking about Atlanta. You're correct. It's moving fast.

Alan Poole:

For sure. So almost everyone I've talked to, Ali, that's in the data center industry sort of landed there rather than aiming for it. So I'd be interested to hear your story. How'd you get into data center and mission-critical?

Ali Greenwood:

Oh, that's a great question and it's kind of a fun story. So right out of school, which I went to Baylor, "Sick 'em Bears," I was working for a real estate development and investment company here locally in Dallas, and was just a young analyst underwriting different real estate development opportunities and came across a data center opportunity that somebody wanted us to help them raise money and equity. And so I was tasked with underwriting a data center development, and I had no clue what a data center was, nor did my company. So we needed to get up to speed and up to speed as quickly as possible and how it was different than traditional real estate asset classes. And so among many other companies, I met with those at Digital Realty Trust that were friendly with the company that I was working for and asked them a million questions about data centers and how they worked and what it cost to build them and what you were leasing them for.

And throughout that process, was given the opportunity to go work for Digital Realty Trust. I had no idea what a data center was, but they were real estate investment trust. I thought it would look really, really good on my resume to go work for a big REIT (real estate investment trust) and was very fortunate and lucky that I was given the opportunity to work there and learn from one of the 800 pound gorillas in the space, Digital Realty Trust. I worked in their asset portfolio management group as well as their sales group, so it was a great opportunity to learn the business. I wouldn't have traded that for the world. And towards the end of my time there, I was meeting with the brokerage community, trying to understand what the data center brokers do, and if there were opportunities that Digital Realty Trust could bid on that maybe we weren't seeing within our pipeline. I thought that was a good way as a salesperson to kind of navigate

some new opportunities. And, in a kind of similar deal, was very fortunate to be offered a job to work in the real estate brokerage world.

So later I went to go work for Jones Lang LaSalle for several years before coming over here to Cushman to help run and bolster the data center platform group here. Real estate business is fun, but the data center business is a lot of fun and it's fun to be on the side where you're really adding value to the customers that are buying your process and your knowledge set and how you can help them navigate their strategies versus buying an individual or particular product that may or may not be the best fit for them. So it's been a fun ride and I'm super fortunate to be here today.

Alan Poole:

I'm interested to hear you talk a bit more about the things that you do to make deals happen. I mean, at a very high level, brokers put deals together, but looking at your bio and hearing you speak last year, I mean you touch a lot of different things. So touching on that a little bit and how you're able to keep up with all this, I mean it is no surprise you're able to pinpoint what's going on with the market, but tell our listeners more about that.

Ali Greenwood:

Yeah, I think a couple of things. The data center brokerage business evolves just as quickly as the data center and the technology business evolves. You have to pivot and go where your clients need you to help them with their strategy. The data center business has changed dramatically. 5, 10, 15 years ago, people were building their own data centers. It was the dot-com and then the dot-bomb, and the birth of the co-location industry as the long distance was deregulated and the cell phone business was coming up. So the business has changed quite a bit. So 10, 15, 20 years ago, we were buying and selling a lot of data centers. We were putting telecommunications companies in some of the first carrier hotels and switches. Now, in the last several years, there's a tremendous amount of co-location business where you were helping companies, Fortune 500 companies find data center capacity in multi-purpose-built data centers.

They were getting out of some of the ones that they built and owned and operated for many years. Maybe you were helping them even sell some of those and then they were moving into co-location data centers, and we were helping them with that strategy. Our business is one in which you're going where your clients need the space. Just because a company is headquartered in Dallas, Texas or Chicago, Illinois, they might need a data center in Northern Virginia and Chicago and Santa Clara and Amsterdam and Singapore. So you really have to understand and have a deep market knowledge of what's going on in every major and tier one and tier two data center markets so that you can help your client roll out their data center strategy wherever that is locationally. So that was a big part of our business and still is a big part of our business, is helping people find data center space and capacity within certain locations that are best for them, whether it's cost of power, it's tax incentives, a lot of things that we'll probably talk about here when it comes to Atlanta.

So it's important that you have a knowledge set of the various markets that are seeing a tremendous amount of data center growth and that have a tremendous amount of existing data center capacity. And then what's been a big phenomenon just in the most recent 24 months, as you've seen a lot of AI and cloud and machine learning, which again, I'm sure we'll touch on here shortly, is the idea of land banking, really large scale land acquisitions on behalf of data

center developers as well as the big five end users. Five years ago, I would help somebody find 25 or 30 acres for a data center development, maybe 50 on the large end. That was a really, really big land acquisition for data center campus.

Now, you're talking of hundreds of acres all over the country and you can't find it fast enough, you can't build it fast enough, you certainly can't power it fast enough, which I'm sure we'll get into too. So it's really, really fun. So from a data center brokerage perspective, we're helping people from Fortune 500, Fortune 1000, even a law firm, find data center capacity within multi-tenant data centers, as well as helping end users and operators find large scale land sites for development and even helping some of the institutional industrial developers that have large land portfolios sell some of those sites to the data center developers. So it's fun and we have to evolve as our business evolves.

Alan Poole:

Let's go ahead and dive into the state of the greater Atlanta market. I mean, there's a lot of really interesting history there, but let's go ahead and get to the meat of what the listeners are here for. Tell us 2023 into first quarter of 2024 and maybe a little bit on outlook.

Ali Greenwood:

So Atlanta, it was a market that I would've called it a tier two market, kind of an emerging market, for the last really five to seven years. And it was one that was certainly on our radar as data center developers and operators would come to us and ask us "What's the next market we should be looking at? Where should we expand?" It's got a lot of canons of a really strong data center market because it's got great fiber, great telecommunications throughout the area. It's a great southeast geographic location, major international airport, large labor force. So it had all the things that check a lot of the boxes that would make it a really, really great data center market.

And then now all of a sudden in 2022, 2023, it hit a lot of the hyperscale and cloud companies radars as they were potentially looking for East Coast alternatives to Northern Virginia. Ashford, Northern Virginia had explosive growth. It's the largest data center market in the world, but as they started running into some utility issues around Dominion, which we all read about in the news, some generation issues from the power side as well as some zoning and entitlement hurdles to get over, people were looking for alternative options on the East Coast, and Atlanta, again, checked all the boxes and made all the sense in the world.

So since then it's become the sixth-largest market in the United States, which is unbelievable. It's just really, really taken off. And what's nice about it is you see where the pockets of sub-market development are in Atlanta. It's really continuing to expand outside. So it's not just your kind of Alpharetta, even Lithia Springs, Douglas is starting to really expand as people are trying to find large pockets and large blocks of acreage where they can get the utilities, they can get the infrastructure and they can get entitlement and zoning. And so it's really been fun to watch the market. We're sitting at a little bit less than 2% vacancy in the Atlanta market in terms of existing product. That's incredible.

Alan Poole:

Unbelievable.

Ali Greenwood:

So what does that mean? That means supply can't keep up with demand, right? There's a tremendous amount of demand. There's a lot of RFP velocity going through the market, not only from the cloud and the hyperscale community, but as AI, machine learning look at places they can put their applications and workloads. So there's a lot of demand in the Atlanta marketplace and very, very little existing supply that can meet that demand. So just like you're seeing in other major US markets, you're starting to see people take down large scale sites. You're talking about hundreds of acres all over the greater Atlanta metro area going through the process to build large scale campuses to meet this demand.

And they're doing that, again, because of the things they're seeing. So 2019 through 2021, Atlanta was roughly a 30 megawatt a year absorption market. In 2022, we saw it jump to 110 megawatts of absorption. And then in 2023, we just finished our year-end market report where we're capturing all the statistics and numbers, Atlanta absorbed 714 megawatts of data center leasing that was signed in the Atlanta marketplace. That's over 500% growth. I mean, that's unbelievable, but that's very similar to what we saw in Northern Virginia over the last several years in terms of just really, really high percentage growth. So you're talking about a traditional market that was 30 megawatts a year going to 700. That's an incredibly staggering amount of growth. And again, these are very large scale pre-leased buildings, pre-leased campuses where these leases are getting signed in the greater Atlanta market. So it's really unbelievable.

Alan Poole:

My computer's autocorrect has learned to identify when I'm trying to type eye-popping. I've been using that phrase a lot lately. Now, the outlook, I mean, there was a message that we were hearing pretty consistently let's say around March, around about a year ago now, in Georgia, and power is one of the biggest issues, the biggest needs for data centers. They're basically giant air conditioners. And what we were hearing in March was we have the generation, we just have some transmission issues. We're not getting transformers fast enough, that kind of thing. And then by September, by the time I met you at the data center summit, I was hearing the generation's actually an issue. Tell us a little bit about that development and how AI has gotten us here.

Ali Greenwood:

Yeah, that's certainly the case. AI machine learning certainly takes a tremendous amount of power consumption, but as does a lot of the cloud hyperscale workloads that we've been seeing over the last several years. I think what you're seeing now is that AI machine learning is exploding at a pace that far surpasses really what public cloud was doing years ago. And the public cloud companies were longer, more established corporations and companies that had the idea of figuring out how to plan and scale accordingly and think futuristically how much capacity they'll need. AI machine learning is evolving so quickly, I think it's super hard for people to pinpoint exactly what they're going to need 3, 5, 7 years out. So we're reacting to that unbelievable demand that's happening on the AI machine learning, and I think even politically, people are trying to figure out AI machine learning, what it is, how far can we go even from a government perspective on how different industry verticals can utilize AI machine learning.

Even your everyday person can do ChatGPT on their phone and utilize a lot of the technology that AI machine learning is doing. I saw a piece on *Good Morning America* last week where they were talking about that AI can book a trip for you cheaper and faster than a traditional travel agency who does that purposely all the time for a living. So the AI machine learning is touching every industry vertical and every individual consumer in a different way, in a faster and a bigger way every single day. So I think that's certainly grown for the demand. What does that mean on the power side? Well, we're asking utility companies to basically become merchant developers in terms of bringing online a tremendous amount of infrastructure substations, switching stations, transmission gear, et cetera, from a capital perspective that is at a pace that we've never seen before.

Previously, you'd asked somebody maybe to build a substation that would power seven, eight, maybe even 10 data center developments in a several mile radius. Now, every single data center development is requiring an onsite customer substation that a lot of times, we're asking the utility providers to fund 100% upfront. So it's a very capital intensive business. It always has been, but now when you're talking about the scale of power that we're talking about and you're talking about $50, $60 million substations going on each one of these individual sites that you're asking public utilities to fund, it's causing an interesting dynamic that we just hadn't seen before. A lot of times, those were things similar to Power Purchase Agreements (PPA) that were funded over 10, 15, 20 years. Now, you're getting things that they need to be built now and you're going to go through it and be fully utilizing that asset within 12 to 36 months. It's just such an incredible growth that we can't keep up with it.

So it is becoming a generation issue for Georgia Power as well as several utilities across the country. They're not the only ones. I talked to utility companies probably five to six hours a week right now on various projects, and they're all in a very similar boat. And so there are still long lead time supply chain issues that are related even coming out of the pandemic with a lot of that equipment and that gear, you can't turn up manufacturing facilities overnight, and you can't build nuclear power plants overnight. Those take several years to build and a lot of money to build, and we're asking for the power yesterday in the data center business.

I think one big misconception that's kind of being reported out there right now is that this is all data centers. There's a tremendous amount of Electronic Vehicle (EV) and manufacturing that is consuming and requiring a lot of power capacity that is also adding to this hurdle or issue that we're running into and seeing across the country. And I think data centers are getting a little bit of a bad rap. It's not just data centers that are the ones needing additional power, a lot of the everyday conveniences and cutting-edge technology that we're asking for requiring that power as well.

Alan Poole:

And that's sort of creating an interesting political situation in Georgia because the Georgia State government, their department of economic development and the governor's office are focusing on making Georgia, as they say, the eMobility capital of the world. So you have to wonder how are they balancing those interests between, I mean for each project you have to come to the state and utilities early and say how much power we're going to need, we do a lot of planning. But we've got EV production plants, we're going to have EV charging. Are you seeing data centers get crowded out as a result of these other new industries?

Ali Greenwood:

I'm not sure that I'm seeing them get crowded out. I think what you're seeing right now is the utility companies are trying their best, as they should, to vet what is real, what's a real project, what's really going to happen versus duplicate or even triplicate efforts on a particular area of the city or a parcel. I think they kind of want to understand almost master plan it, like you used to look at communities and developments and zoning overlays, right? Master plan, this is going to go data center and it's going to be at 3 megawatts an acre and it's this 1200 acre parcel. This is going to go EV or solar manufacturing and it's going to be X amount of million square feet and this is roughly how much power these EV and manufacturing facilities need. So I think it's more the utility companies are getting overwhelmed with a lot of requests and it's how can they really vet out and almost master plan what those requests realistically are going to... What's going to come to fruition in a given particular area of greater Atlanta, for example.

So you're certainly looking at balancing interest in terms of tax incentives, which I'm sure we'll get into here in a second, but that's a big part of it, but also I think just almost master planning communities, understanding, balancing out what's best for the community in terms of labor force, residential communities, live, work, play. You don't want everybody to live in an area where they can't also then go eat out and bank, and do a lot of other things. So it is almost like you need to get back to thinking through and master planning what makes sense where in a given metro area and then that, I think, could potentially help with a lot of the duplicate and triplicate efforts that people are looking at in terms of planning and requests for infrastructure needs and taxes it to needs and things like that.

Alan Poole:

Let's turn to something you touched on briefly. How are the deal structures between developers and utilities looking now? How are they evolving? Because you have to come to them early, you have to get the substation set up and how do you pay for that and what kind of power usage requirements are the utilities requiring in order to justify the spend from their end?

Ali Greenwood:

Yeah, that's evolving and it's almost evolving by the week and changing by the week.

Alan Poole:

You better release this fast.

Ali Greenwood:

Yeah, that's exactly right. The latest, as of kind of in the last call it 30 to 90 days, particularly in the Atlanta marketplace, is that most of the utilities, Electormagnetic Compatibility (EMCs) as well as the public utility there, Georgia Power, are actually now stating that they would like that capital expenditure (CapEx) upfront for the substation builds, and maybe you're at some of the reconductor work that might be done, and there's even some conversation around if there's going to be power minimums and thresholds put into place once that substation is energized or delivered.

So say you tell somebody you need 150 megawatts substation, you're going to need 36 megawatts every six months, and they say, "Okay, we'll spend the money and we'll do it. We'll

deliver it to you." Well then maybe you're paying for that regardless of if the servers themselves are spinning and actually consuming that amount of power because the CapEx was put forth and the generation contracts were put in place to procure that power. So it's a newer model than I think historically, a lot of that was built into your rates over a 10, 15, 20 year period of time, which is kind of historically how a lot of the contracts have been set up.

So I think people are having to rethink and it's all about capital balance as well as just sensible generation balance, but rethinking how they structure those contracts, to your point, and that's around utility, I think people are taking a similar approach to water and sewer in particular areas. I think people like to focus on power and power is certainly king when it comes to the data center industry, but water and sewer are very important. I would say they're becoming even more critical as we look at AI and machine learning and what that potentially means long-term for the data center environments. AI and machine learning, as I mentioned before, are really, really high density, meaning you've got a lot of power in a small amount of square footage and you've got to cool that a lot differently than you do more traditional applications and workloads. What does that mean? Well, the most effective way to do that is water.

And so for a while, the data center industry kind of went away from water usage as environmental, social, and governance (ESG) and renewables and different initiatives were taking place and now, people are kind of master planning for what the future of the data center looks like. What does that need? If you do have a data center that's specifically all AI machine learning, you're likely going to need a water source there. So back to your question, how do you then work with the cities and the municipalities to get water and sewer infrastructure there and then obviously, you're procuring that water from the municipalities and from the cities, so what cities have the water sources that they can supply and sell to you and vice versa, making sure they have adequate sewer as well. So I think that's a big part too of that upfront, what I call horizontal development.

So kind of zooming out a little bit, when you're looking at land size for acquisitions, having best-in-class local due diligence teams that can get to the city, get to planning and zoning (PNZ), get to the municipalities and start master planning with them, the water sewer needs, the utility needs at the utility company, all that horizontal development, it happens before you ever deliver steel and concrete. Until the four walls which we think about as data center development, there's a lot of planning and upfront thought that needs to go into that horizontal development before you ultimately decide you're going to move forward on buying and procuring a land site.

And that's a lot of what we spend time on right now, is that horizontal development and it's a balance of who's doing that, is it the current landowner? I mean the current landowner could be a generational farmer, right? The current landowner could be an institutional industrial developer. Those different owners have different capital structures, different risk tolerance, different even capability sets on how much they could do themselves versus how much they're going to let the ultimate developer of the site do. And so that's an interesting delineation as well when you're looking at even just land pricing as it relates to the greater Atlanta metro area.

Alan Poole:

Some of these procurement of power and water issues sort of implicate how much you're using, and I've heard that there can be a challenge matching your leases or customer contracts, the actual usage to what the power companies are requiring. Are you seeing this as an issue in your development practice?

Ali Greenwood:

It's certainly coming up as the utility companies are starting to pivot how they structure their ultimate utility contracts with the data center operators and developers. I think ultimately it's going to come into a balance where you're going to look at the end user, whether it's a... I'm looking at a building that's got a PriceWaterhouseCooper (PWC) logo on it or Amazon or Google or Coca-Cola. If they're going to be ultimately the ones that are populating the servers in that facility and they're paying a rental rate to use the operator and developer of the site and they're underutilizing the site, they're using 20% of the capacity that they leased from you or procured from you, I think it's ultimately going to have to get passed through in some form or fashion to them. Because to your point, if we're asking for that utility, we have to be as thoughtful as possible in planning out exactly what we think we'll need and what we want versus saying, "Well, I just needed a gigawatt yesterday."

Nobody needed a gigawatt yesterday. Maybe you're really starting to put a lot of pen to paper knowing this is realistically how much is going to be a lot closer to how much I'm actually going to consume, knowing ultimately, if you're going to have to pay for that, whether you consume it or not, it's going to allow for a lot the best planning we can do. It's never a perfect science and we're not going to get it right and you hate to underestimate, but at the same time, if you know you're paying for it, I think we're going to have to just, as a whole, get better in terms of using our best guesses, if you will.

Alan Poole:

Some of the big issues in data center development that we've already covered, land, power, water, we haven't really gotten into tax incentives yet, or just beneficial tax structures. What are the best things you're seeing in terms of attracting development and how does Georgia stack up?

Ali Greenwood:

Yeah, it's a great question. I would say generally speaking in terms of tax incentives, sales and use tax is the most helpful for large scale data center development. The end users that are actually procuring net new servers that are going into those facilities, which is the majority of the absorption in the demand we're seeing right now, and how often they might refresh those servers. More technology-forward-type companies are doing tech refreshes every three to five years on a lot of their equipment and every time they're doing that, that's net new spend and investment.

And so sales and use tax is extremely impactful versus maybe an industry vertical that does a tech refresh every 10 to 15 years, maybe even established company that's been around a really long time, they're not going to do technology refreshes that frequently. But the biggest consumers of the absorption and demand right now are, they're very technology-forward companies. So that sales and use tax is very, very impactful to them, and Atlanta has a great sales and use tax program. That was a big reason why we saw a lot of the explosive growth over the last couple of years in Atlanta.

I think, again, it depends on when the podcast get released, but there's a news article that came out very recently that the State of Georgia is looking at pulling back on that tax incentive. They had extended it originally through 2033 I believe, and they've done some math and feel like the impact of that is about $44 million, they believe, in 2023 of tax incentives that were abated as a

result of that, that if they were able to recapture that or put the program on pause, they could reinvest in the utility companies and the infrastructure upgrades they need as a state, which would be interesting. I think the demand and the velocity there is one that it's going to be a very large market, but tax incentives are impactful and people certainly look at that in our practice when we have end users, for example, that are comparing markets, it's certainly a big consideration in what sales and use tax programs are there for data center developments.

Alan Poole:

So in the news release for that bill, and it looks like it's got some legs to it, where they're looking at ending the sales and use tax exemption certificates on I think July 1st, one of the explicit intentions behind that bill is to try and put a damper on demand because of how much power data center companies are using. Do you see that happening? Is this actually going to have that effect?

Ali Greenwood:

I don't see it changing the power needs of any particular company. Ultimately, if somebody decides that there's a ceiling or a cap on a particular deployment in a market, they're going to look at alternative markets a lot of times. I mean, once you've established nodes and a presence in a market, it's likely you're going to continue to have a presence there and it might continue to grow, but it might dampen the velocity in which you grow in that particular market, because you might pivot to something else that's going to check all your boxes again.

I think right now, the absolute number one is where can we get large scale power. Tax incentives is on that list, but it's below, you got to get the power first. I think what it would do is it wouldn't change the requirement or the needs of the end user, it just might change the location in which they ultimately decide to go. So I don't think it's going to change how much an AI or machine learning company needs. It just might cap what they might be able to do in that particular market, so they go to a different market, which I know certainly nobody listening to this call would like to see. Atlanta's a great market. I think it has a lot of canons to be a long-term, great data center market for a long time.

Alan Poole:

Yeah, I mean when I'm thinking about the spillover effects, you think, well, Alabama and Mississippi and South Carolina are right there. Do you think some people will be running there?

Ali Greenwood:

I do think there's going to be an uptick in these markets. We hear a lot of conversations around core plus one as companies look at a particular market and then hurdles or things, blockades, come up in that particular market. They say, "Okay, well I've already got a presence in a Chicago or in a Dallas or in Northern Virginia, so now maybe you go core plus one," and you look at the surrounding states because you've already kind of got infrastructure people, infrastructure, human infrastructure, et cetera in that area. So going just a little bit out, expanding your circle a little bit out might be easier than going four or five states over. So I think you're going to see a little bit of a core plus one effect. Absolutely.

I think right now, people are almost kind of reverse engineering a lot of the site selection process. Say you take a map of the United States and you're almost looking at the utility

territories and which ones have generation capacity, had the ability to service data centers and looking within their utility and figuring out land opportunities there, but you're always going to have demand in your core markets. Northern Virginia is not going anywhere. Santa Clara hasn't gone anywhere, Chicago, Dallas. So once you have these, Phoenix, established large tier one markets, there's always going to be demand there.

But when you're looking at the emerging markets that pop up or where you see people maybe take some big steps, right now, I think they're going to follow the power and they're going to follow the utility companies that really want to do additional data center development and have the ability to do so. So I think you're going to see not necessarily just Alabama, Mississippi, Carolinas, that does fall into your core plus one factor, but I think you're going to see a lot of new potential opportunities like in the upper Midwest, like Indiana, and even we've heard Wisconsin, other areas maybe that haven't seen as much data center development prior.

Alan Poole:

That sort of leads me into my next topic I wanted to cover. I read today about the Amazon deal where they purchased the Talen nuclear data center in Pennsylvania looking to get up to 960 megawatts, and one of the things we've talked about in the past is one way you could solve the power issue is getting right up close to a plant. Tell me about what you're seeing in the market that fits into that, either that bucket or maybe something else that's interesting, trying to solve the power issue in a new way.

Ali Greenwood:

Yeah, it's a great question. I do think we're going to continue to explore alternative energy options. I don't think we have a choice as an industry but to do that. People have been talking about small cell nuclear and nuclear in general for the last couple of years. I think we're going to have to look at that. I think one kind of back to that reverse engineering comment, the reason people are looking at areas of the country like that is because that is where potentially underutilized or even, search for the word here, but where there are power plants that haven't been used for a while, maybe they're even shuttered power plants associated with auto manufacturing. I think people are going to start identifying, to your point, power plants where there's excess capacity or an opportunity there. I think people are going to start certainly becoming more comfortable with nuclear as an energy source. And then I think something else you need to follow as we start seeing some of the EPA restrictions coming into place around restricting even the ability to deploy generators on site at data centers. That's super interesting.

I think data center purists would say that the original data center was built and designed to run off generator and utility is a backup, but it's more cost-effective to run off utility and generator's your backup. So it'll be interesting as you start looking at particular markets across the US that are saying, "We're not going to allow generators to be deployed at data centers," then what's your plan? Your primary and your redundant source of power have to come from something else. So I think you are going to see, similar to the story you referenced, people start exploring alternative energy sources that they're comfortable with because we've got to solve the issue that we talked about, and as I mentioned earlier on, is you can't build a nuclear power plant overnight. You can't fire up a bunch of shuttered coal plants overnight. So the utility crunch is going to cause people to get creative, which is great.

Alan Poole:

I heard a very bold statement, and I'd like to get your thoughts on it. I was at Metro Connect in Fort Lauderdale, had a great time, and Marc Ganzi of DigitalBridge said: "if you don't have a renewable source of energy behind the meter in next four to five years, you might be out of the business altogether." What do you think about that?

Ali Greenwood:

I think he's probably right.

Alan Poole:

And then maybe we should talk about what renewable means because everybody thinks I'm talking about solar and that's not true.

Ali Greenwood:

That was going to be my first comment. I think that that's maybe the bigger question is what is renewable to somebody? You can't create more wind out of nowhere. The wind either blows in West Texas, for example, or it doesn't. And again, standing up wind farms overnight, those are very also, as we talked about before, capital intensive. I remember when we first started looking at some of the renewable PPAs that some of the bigger data center buyers were signing years ago, the companies were saying, "Yep, we can stand up solar. We can stand up wind to power your data center, but we need you to sign this PPA," and it's a 15, 20+ year PPA. And these companies at the time were looking up and saying, "We're not even that old as a company. You want us to sign a utility agreement or a contract agreement to fund this renewable energy source and contract?"

So that's now been widely adopted, but I think it's kind of the definition of what renewable is. But you're certainly starting to see a lot of these data center operators, developers stand up entire staffs around exploring renewable energy sources and how comfortable they can be with that. And I think a lot of it might be driven by regulations and political views on it too. Right now, it's very hard to power a data center off of solar at a hundred percent. Could you power a house off of solar? Sure. So there might be a future in which utility companies find a way to shift less power intensive uses onto solar or things that could be achieved off of maybe renewable solar to free up maybe more traditional utility for data center, EV, et cetera. So it'd be interesting to see and that interesting to think about. You have an EV plant that's utilizing traditional utility, yet you're having others utilize EV technology. So it'll be interesting.

Alan Poole:

Well, I like to think of it all as a portfolio. There's this whole concept of greenwashing that people are looking at an ESG and kind of getting to what's really renewable. But I think this sort of portfolio play that you were getting at is something we may be seeing in the future where, well, you're getting your power from the utility, but how much is renewable? Let's touch on one more point before we start to wrap up, and I want to get back to submarket opportunities because there are the usual suspects in Georgia, right? Lithonia Springs, Douglas County, Alpharetta. Are we seeing new submarket opportunities in Georgia as a result of certain places nearing capacity?

Ali Greenwood:

We certainly are. You've already seen a lot of announcements, but I think you're going to see a lot of growth and announcements east of the city. Conyers, Covington, Amazon Web Services just announced 430 acres I believe that they took down in Covington. Obviously Facebook and Social Circle have been there for a while, but they continue to invest and develop there. So I think you're going to see continued development out east. I think you're going to see continued development southwest of the city, Fairburn, Palmetto areas, and I think that's because that's where you have larger pockets of developable land as well as opportunistic municipalities, et cetera, that are going to help you get through entitlement process, and some of which are very interested in offering tax incentives on a local basis to continue to attract data centers.

So entitlement, larger blocks of developable even potentially affordable land, as well as the ability for different EMCs or utilities where it's an area of the market that maybe is less constrained by traditional things compared to some of the other more established submarkets in Atlanta. I think you'll continue to see people go a little bit south too. Quality Technology Services obviously has the large development in Fayetteville. So I think you're going to see those areas have a tremendous amount of announcements over the next 24 months, and those will be very large data center submarkets in the near future.

Alan Poole:

As companies look to less developed areas, are you seeing a greater need to have a good political ground game to avoid things like "not in my backyard" folks or local resistance to the types of infrastructure we're trying to develop?

Ali Greenwood:

It's certainly important. We haven't run into that as much in the greater Atlanta market other than more recently I think, and obviously in the Douglasville market. But I think for the most part, the majority of the greater Atlanta metro area is still interested in data center development. You're not seeing that as much, but as you follow in the news all the time, that that's a continued concern in Northern Virginia and the Northern Virginia market. And when you're looking at things that take a high priority in most markets, it's kind of power first and then entitlement and water, sewer infrastructure is fairly quick after that. I would say in Northern Virginia, it's almost now entitlement zoning's up there just as close, if not maybe even before power. So I think it's very important that you have a very good understanding of what the current zoning and entitlements are on a particular piece of land that you're looking at and what the process is to get that rezoned and fully entitled for data center development. That's a very, very important part of upfront due diligence.

Alan Poole:

So I always like to ask as sort of closing thoughts, where do you think things will be in the next one to three years, and what do you think the next big challenges are that we haven't quite seen because it's lurking around the corner?

Ali Greenwood:

That's a great question. I'd love to be able to predict the data center future. I would tell you Atlanta's in a great spot. I think for the next one to three years, you're going to see a lot of announcements because there's a lot of large blocks of land acres that are under contracts that have not been publicly announced yet. So I think you're going to see continued announcements, and obviously, that's in reaction to demand. And so you're going to see a big evolution of data center submarkets, and I think data center submarkets will throw off additional development in those areas, single family residential.

There's going to be other things that are going to develop in those particular areas to support the data centers in those markets. So I think you're going to see a growth in the data center market geography of Atlanta, which is great. What the next big hurdle is, it'll be interesting to continue to follow the utilities in Atlanta and certainly potentially even the tax incentives and what that impact could be. So those will be interesting to continue to follow. I think also as you go out to more rural markets, water and sewer and how people solve for that in a creative fashion so that you're able to get the development that you need to out of ground and then you're thoughtful about all of your resources. So I think those are the big three things to continue to look for in Atlanta.

Alan Poole:

I meant to ask this earlier, but have you seen any interesting solutions to the water issue? That's just starting to brim on people's radars and I'm not sure how many people have thought about it.

Ali Greenwood:

No, I mean, it's certainly on people's radars and people are looking to solve it. I haven't seen necessarily any creative solutions around the water part. We are seeing creative solutions around the sewer part. There's shared lift stations and things happening in certain areas of the greater Atlanta market to solve for the sewer and the wastewater, but not so much on the water part. It's hard to create water if you don't have water.

Alan Poole:

Right. Sewer is probably the thing I meant to say.

Ali Greenwood:

Yeah. All good.

Alan Poole:

One last closing question. So on tax incentives, often the sales pitch for those is your state or locality will forego revenue and in return, you will get X. Are you seeing developers do enough to communicate what they think will happen and deliver on those, not promises, but projections to keep the incentives safe?

Ali Greenwood:

That's a great question. I think as a community, we can continue to do better on that in the data center community. I think it's a balance between delivering realistic investment statistics and not appearing like you're maybe taking away resources from something else. So it's a little bit of a balance, but I think the investment in these is tremendous and it is very real and it's very realized, and it's not putting another kid in the schools that is potentially taxing on the schools. It's not putting trucks on the road like large manufacturing and distribution facilities. Obviously I'm a little biased. I'm very pro data center development, but I think overall, the tax incentives, it's a great program because it does bring up the overall investment value in the particular area. And I think it's good for the... So I think it's a positive program, but we could certainly continue to do better at our delivery on the overall impact. And I think that will hopefully solve a lot of the, to your point, NIMBYism that could arise.

Alan Poole:

Well, I think that's a pretty good place to close. This has been a fascinating discussion. We, again, need to get it released very quickly so it's accurate because everything's changing. But Ali, thanks very much for all the time you've given to us at the Technology Association of Georgia.

Ali Greenwood:

Thank you. Thanks, Alan. Thanks for having me, and look forward to talking again soon.

Alan Poole:

Absolutely. Well, we hope you enjoyed this episode. I know, I sure did. If you like what you've heard, please make sure you're subscribing to this podcast on Spotify, Apple Podcasts, or whatever your podcast delivery app of choice is. Follow Troutman Pepper and follow the Technology Association of Georgia and also the TAG Infrastructure Society, which just debuted. It's a LinkedIn page and hey, maybe give Ali and Cushman & Wakefield a follow as well. They know what they're doing. They're a great resource. And that's it for this episode, and we will catch you next time.